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EXAMINER

NGUYEN, KIMBERLY T

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 07/22/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

MF-9

**Office Action Summary**

Application No.

09/767,057

Applicant(s)

MURSCHALL ET AL.

Examiner

Kimberly T. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4 and 5.      6) ☐ Other: \_\_\_\_

## DETAILED ACTION

### *Election/Restrictions*

Acknowledgement is made of the election of Group I, claims 1-16.

### *Claim Objections*

Claim 5 is objected to because of the following informalities: "bisbenzoxazoles" should be changed to "bisbenzoazoles". Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 1-15** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, it is not clear what Applicants claim since claim 1 shows the phrase "whose principle constituent is a crystallizable thermoplastic" *preceding* the transition phrase of "the film comprises..." Thus, the scope of the claim is unclear. ✓

In claim 1, the phrase "at least barium sulfate" is not clear. ✓

The term "principal" in the phrase "whose principal constituent is a...thermoplastic" in claim 1 is a relative term which renders the claim indefinite. The term "principal" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. ✓

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Claim 13 recites the limitation "the embodiment" in the second line of claim 13. There is insufficient antecedent basis for this limitation in the claim. ✓

In claim 15, the term "too" is inappropriate claim language. ✓

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-7 and 13-15** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al., U.S. Pat. No. 5,660,931 in view of Srinivasan, U.S. Pat. No. 6,309,987 B1.

Kim shows a white film (core layer) comprising polyethylene terephthalate (crystallizable thermoplastic), barium sulfate (column 2, lines 3-9), and bisbenzazole (optical brightener) (column 5, lines 13-22). Kim shows that the white film has a thickness of 12 micrometers (column 9, lines 11-16). Kim shows that the rutile-type titanium dioxide has an average particle diameter ranging from 0.1 to 3 micrometers (column 2, lines 54-55). Kim shows that the degree of whiteness of the film is greater than 85% (Table 2).

Though Kim shows that the bisbenzazole is added in an amount so that the reflectivity at 440 nm becomes greater than 75% (column 5, lines 21-22), Kim does not show that the bisbenzazole is 10-50,000 ppm of the weight of the crystallizable thermoplastic as in instant claim 4. Kim does not show the percentage by weights as in instant claims 3, 6, 7, and 9. However, such concentrations and percentages by weight are properties which can be easily determined by one of ordinary skill in the art. With regard to the limitation of the concentrations

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and percentages by weight, absent a showing of unexpected results, it is obvious to modify the conditions of a composition because they are merely the result of routine experimentation. The experimental modification of prior art in order to optimize operation conditions (e.g. concentrations and percentages by weight) fails to render claims patentable in the absence of unexpected results.

Kim does not show that the white film is opaque as in instant claims 1-5 and 9-10; however, the opacity of a film is relative and, absent any evidence to the contrary, the relative level of opacity is a property which can be easily determined by one of ordinary skill in the art by adjusting the concentration of the white pigments and thicknesses. With regard to the limitation of the opacity, absent a showing of unexpected results, it is obvious to modify the conditions of a composition because they are merely the result of routine experimentation. The experimental modification of prior art in order to optimize operation conditions (e.g. opacity) fails to render claims patentable in the absence of unexpected results.

Kim does not show that the film comprises a UV stabilizer or a flame retardant as in instant claim 1. Srinivasan comprises an outdoor cover substrate comprising multiple layers of polyethylene (crystallizable thermoplastic) comprising a UV stabilizer of hindered amines and triazines (column 1, lines 65-67) and flame retardant such as phosphorous compounds (column 1, lines 33-37) wherein the flame retardant and UV stabilizer are present in any of the layers as in instant claim 14. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the layers with the arrangement of the barium sulfate, flame retardant, optical brightener, and UV stabilizer as in the instant invention since all of the layers can have these components present in any of the layers. Further, it would have been obvious to

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one of ordinary skill in the art at the time the invention was made to use a flame retardant and UV stabilizer in the film of Kim because it is known in the art that flame retardant and UV stabilizers can be added to polyethylene layered substrates to protect them from weathering and from excessive heat and flames in order to maintain its mechanical strength and appearance.

Claim 15 is rejected because the phrase "have/has been provided" introduces a process limitations to the product claim. The patentability of a product does not depend on its method of production. If the product in the product by process claim is the same as or obvious from a product of the prior art, the claims are unpatentable even though the prior art was made by a different process. *MPEP 2113*. Further, process limitations are given no patentable weight in product claims.

**Claim 8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al., U.S. Pat. No. 5,660,931 in view of Srinivasan, U.S. Pat. No. 6,30,987 B1 and in further view of Tono et al., U.S. Pat. No. 6,410,122 B1.

Kim and Srinivasan are relied upon as above for claims 1 and 7. Kim does not show the organic phosphorous compounds as shown in instant claim 8. Tono shows a fire resistant sheet molding comprising polyethylene and dimethyl methylphosphonate (column 7, lines 44-58). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use dimethyl methylphosphonate as the flame retardant in Kim because it is known that such a compound is effectively used to impart fire resistance to polyethylene products.

**Claim 10** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al., U.S. Pat. No. 5,660,931 in view of Srinivasan, U.S. Pat. No. 6,309,987 B1 in further view of von Meer, U.S. Pat. No. 4,384,040.

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Kim and Srinivasan are relied upon as above for claim 1.

Kim does not show the blue dye and amount of blue dye as in instant claim 6. However, the amount of blue dye is a property which can be easily determined by one of ordinary skill in the art. With regard to the limitation of the amount of blue dye, absent a showing of unexpected results, it is obvious to modify the conditions of a composition because they are merely the result of routine experimentation. The experimental modification of prior art in order to optimize operation conditions (e.g. amount of dye) fails to render claims patentable in the absence of unexpected results. All of the aforementioned limitations are result effective as they control the degree of whiteness of the film. As such, they are optimizable. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the film recording sheet with the limitations of the percentages and ranges) since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Von Meer shows a photographic paper wherein the white titanium dioxide pigmented paper is dyed with cobalt blue or ultramarine (column 3, line 68 to column 4, line 25). It would have been obvious to one of ordinary skill in the art at the time the invention was made to cobalt blue or ultramarine in addition to the whitening titanium dioxide because it is known that cobalt blue and ultramarine is used to enhance the whiteness and to compensate for the yellowish tint of the invention.

Kim does not show that the white film is opaque as in instant claim 10; however, the opacity of a film is relative and, absent any evidence to the contrary, the relative level of opacity is a property which can be easily determined by one of ordinary skill in the art by adjusting the

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concentration of the white pigments and thicknesses. With regard to the limitation of the opacity, absent a showing of unexpected results, it is obvious to modify the conditions of a composition because they are merely the result of routine experimentation. The experimental modification of prior art in order to optimize operation conditions (e.g. opacity) fails to render claims patentable in the absence of unexpected results.

**Claim 9 and 11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al., U.S. Pat. No. 5,660,931 in view of Srinivasan, U.S. Pat. No. 6,309,987 B1 in further in view of Yamazaki, U.S. Pat. No. 6,106,924.

Kim is relied upon as above for claim 1. Kim further shows that the average diameter for the barium sulfate particles is from 0.1 to 0.5 micrometers (column 5, lines 10-12).

Kim does not specifically show that the barium sulfate is in the form of fine-particle powder or that it is colorless as in instant claim 11. However, since the average diameter for the barium sulfate particles is from 0.1 to 0.5 micrometers, it would be known to one of ordinary skill that a particle having this diameter is in fine-particle powder form. Further, barium sulfate is known to be white, which also means colorless.

Kim does not show that the barium sulfate is precipitated as in instant claim 7. Yamazaki shows a polyethylene laminate material comprising precipitated barium sulfate (column 4, lines 44-49). It would have been obvious to one of ordinary skill in the art at the time the invention was made to precipitated barium sulfate in the invention of Kim since it is known in the art that precipitated barium sulfate is effectively used for imparting whiteness to polyethylene laminates.

Kim does not show that the white film is opaque as in instant claim 11; however, the level of opacity is a property which can be easily determined by one of ordinary skill in the art



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by adjusting the concentration of the white pigments and thicknesses. With regard to the limitation of the opacity, absent a showing of unexpected results, it is obvious to modify the conditions of a composition because they are merely the result of routine experimentation. The experimental modification of prior art in order to optimize operation conditions (e.g. opacity) fails to render claims patentable in the absence of unexpected results. All of the aforementioned limitations are result effective as they control the degree of opacity of the film. As such, they are optimizable. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the white film with the limitations of the opacity since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Kim does not show the hydrolysis stabilizer as in instant claim 9. Yamazaki shows that calcium stearate is added to the laminate (column 8, line 42). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use an alkaline earth metal stearate in the polyethylene film of Kim since calcium stearate is known to be an effective slip agent (column 8, line 41).

**Claim 12** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al., U.S. Pat. No. 5,660,931 in view of Srinivasan, U.S. Pat. No. 6,309,987 B1.

Kim and Srinivasan are relied upon as above for claim 1. Though Kim shows percentages of surface gloss in Table 3 and transmittance in Table 2, Kim does not specifically show the surface gloss and luminous transmittance as instant claim 12. However, the amount of surface gloss and transmittance are properties which can be easily determined by one of ordinary skill in the art. With regard to the limitation of the surface gloss and luminous transmittance,

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absent a showing of unexpected results, it is obvious to modify the conditions of a composition because they are merely the result of routine experimentation. The experimental modification of prior art in order to optimize operation conditions (e.g. surface gloss and luminous transmittance) fails to render claims patentable in the absence of unexpected results. All of the aforementioned limitations are result effective as they control the degree of glossiness and luminous transmittance of the film. As such, they are optimizable. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the white film with the limitations of the opacity since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Kim does not show that the white film is opaque as in instant claim 12; however, the level of opacity is a property which can be easily determined by one of ordinary skill in the art by adjusting the concentration of the white pigments and thicknesses. With regard to the limitation of the opacity, absent a showing of unexpected results, it is obvious to modify the conditions of a composition because they are merely the result of routine experimentation. The experimental modification of prior art in order to optimize operation conditions (e.g. opacity) fails to render claims patentable in the absence of unexpected results. All of the aforementioned limitations are result effective as they control the degree of opacity of the film. As such, they are optimizable. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the white film with the limitations of the opacity since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

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Claim 12 is rejected because the phrases "gloss...measured to DIN 67530," "measured by the Sedigraph method," and "measured to ASTM-D 1003" introduce process limitations to the product claim. The patentability of a product does not depend on its method of production. If the product in the product by process claim is the same as or obvious from a product of the prior art, the claims are unpatentable even though the prior art was made by a different process. *MPEP 2113*. Further, process limitations are given no patentable weight in product claims.

**Claim 16** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al., U.S. Pat. No. 5,660,931 in view of Srinivasan, U.S. Pat. No. 6,309,987 B1.

Kim and Srinivasan are relied upon as above for claim 1. Kim further shows that alumina may be provided to impart scratch-resistance to the film (column 5, lines 1-5), and thus, would impart scratch-resistance to both sides of the film.

Kim does not show that the white film is opaque as in instant claim 12; however, the level of opacity is a property which can be easily determined by one of ordinary skill in the art by adjusting the concentration of the white pigments and thicknesses. With regard to the limitation of the opacity, absent a showing of unexpected results, it is obvious to modify the conditions of a composition because they are merely the result of routine experimentation. The experimental modification of prior art in order to optimize operation conditions (e.g. opacity) fails to render claims patentable in the absence of unexpected results. All of the aforementioned limitations are result effective as they control the degree of opacity of the film. As such, they are optimizable. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the white film with the limitations of the opacity since it has been

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held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Claim 16 is rejected because the phrase "has been provided on" introduce a process limitation to the product claim. The patentability of a product does not depend on its method of production. If the product in the product by process claim is the same as or obvious from a product of the prior art, the claims are unpatentable even though the prior art was made by a different process. *MPEP 2113*. Further, process limitations are given no patentable weight in product claims.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly T. Nguyen whose telephone number is (703) 308-8176. The examiner can normally be reached on Monday to Friday, except on every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on (703) 308-0449. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Kimberly T. Nguyen  
Examiner  
July 11, 2002

CYNTHIA H. KELLY  
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